

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number
WO 2005/032757 A1

(51) International Patent Classification⁷: **B23K 26/03**

(21) International Application Number:
PCT/US2004/033055

(22) International Filing Date:
30 September 2004 (30.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/507,660 30 September 2003 (30.09.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

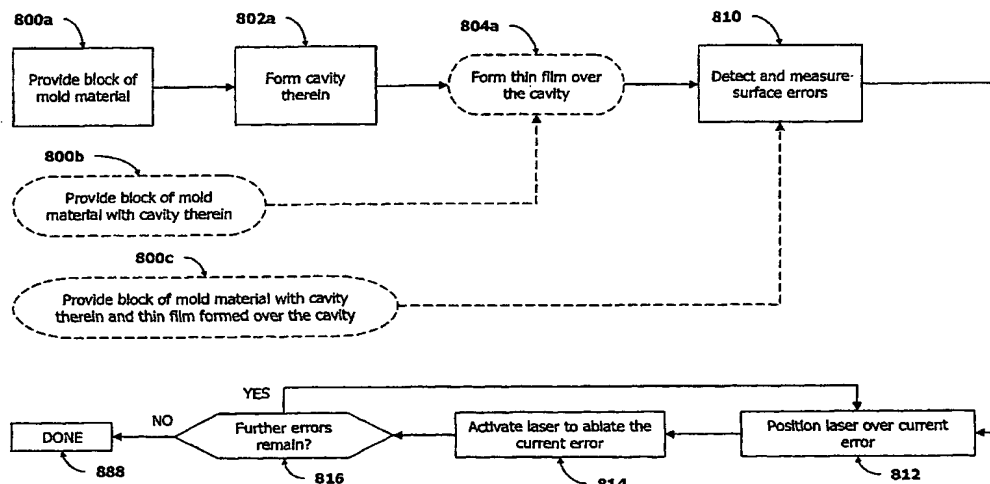
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: **MOLD FOR OPTICAL COMPONENTS**



(57) Abstract: A method is provided for manufacturing a high-precision mold whereby a feature matching a desired feature design is carved into a hard mold material (41) using, for example, a diamond grinding wheel and/or a diamond turning point. Inherent imprecision and errors (49) introduced by the use of the grinding wheel/turning point are measured to determine deviations from the desired feature design. An ultrafast shortpulse laser is then activated to desirably ablate the deviations, thereby correcting the errors and conforming the feature to the desired shape. Furthermore, a thin film (1602) may be formed over the feature either prior to or after the laser ablation process, where the error measurement and laser ablation processes detects and ablates errors on the surface of the thin film, respectively. Additionally, the laser ablation process may be applied directly to, for example, an optical lens (1400) formed from an imprecise mold to remove any errors and imperfections thereon.



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